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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,837	12/28/2000	Rainer Loesch	2345/17A	1255
26646	7590	01/28/2008		
KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004				
			EXAMINER FERGUSON, LAWRENCE D	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 01/28/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/750,837

Applicant(s)

LOESCH ET AL.

Examiner

Lawrence D. Ferguson

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,7 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,7 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/8/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment mailed October 26, 2007. Claims 5, 7 and 11 were amended and claims 1-4, 6, 8-10 and 12 were cancelled rendering claims 5, 7 and 11 pending in this case. After further consideration, the indicated allowability of claims 5, 7 and 11 is withdrawn.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections – 35 USC § 103(a)

3. Claims 5, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saaski et al. (U.S. 4,778,987).

Saaski discloses a measuring device (column 1, lines 23-24) providing a high degree of resolution in measuring physical parameters (column 1, lines 36-37). Saaski discloses a calibrated measuring device (column 2, lines 67-68) which serves the same function as a scale for technical devices. The reference discloses two or more alternating layers of chrome and crystalline silicon (column 18, lines 67-68 and column 29, line 20) with each layer being about 25 and 100 Angstroms thick, respectively (2.5nm and 10nm) (column 19, lines 2-4), as in claim 14, as about 100 Angstroms

appears to be fewer than ten nanometers. The alternating layers of chrome and silicon are interpreted as representing the first, second, third and fourth material layers in a repeating configuration. This configuration meets the limitation of the third material layers thicknesses being different from the second material layers thicknesses. The configuration does not meet the limitation of the fourth material layers thicknesses being the same as the first material layers thicknesses.

Although Saaski does not specifically disclose the thickness of the fourth material layers is the same as the thickness of the first material layers, thickness is an optimizable feature. Therefore, in the absence of any evidence to the contrary, it would have been obvious to one of ordinary skill in the art to optimize the thickness of the fourth material layer because discovering the optimum or workable range involves only routine skill in the art. The thickness directly affects the durability of the measuring device. *In re Aller* 105 USPQ 233 and see *In re Boesch*, 617 USPQ 215. In the absence of evidence of criticality for the thickness of the fourth material layer by Applicant, it is obvious to optimize the material.

In instant claims 5, 7 and 11, the phrase, "used for high-resolution or ultrahigh resolution imaging of structures" is an intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ

235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Additionally, in claims 5, 7 and 11, the phrase "when imaged using one of high-resolution and ultrahigh-resolution imaging methods" introduces a process limitation to the product claim. Additionally, in claim 5, the phrase "deposited by a material deposition method in a deposition direction" also introduces a process limitation to the product claim. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966. Further, process limitations are given no patentable weight in product claims.

Because the reference uses the same materials as applicant and because the first and second material layers are made out of different materials and different thicknesses, it would have been obvious to one of ordinary skill in the art that the first and second material layers have different strain and band gaps, absent any evidence to the contrary, as in claims 7, 13 and 15.

Response to Arguments

4. Applicant's remarks to 35 USC 103(a) as being unpatentable over Saaski et al. (U.S. 4,778,987) have been considered but are unpersuasive. After further consideration, the indicated allowability of claims 5, 7 and 11 has been withdrawn. The alternating layers of chrome and silicon are interpreted as representing the first, second,

third and fourth material layers in a repeating configuration. This configuration meets the limitation of the third material layers thicknesses being different from the second material layers thicknesses. The configuration does not meet the limitation of the fourth material layers thicknesses being the same as the first material layers thicknesses.

Although Saaski does not specifically disclose the thickness of the fourth material layers is the same as the thickness of the first material layers, thickness is an optimizable feature. Therefore, in the absence of any evidence to the contrary, it would have been obvious to one of ordinary skill in the art to optimize the thickness of the fourth material layer because discovering the optimum or workable range involves only routine skill in the art. The thickness directly affects the durability of the measuring device. *In re Aller* 105 USPQ 233 and see *In re Boesch*, 617 USPQ 215. In the absence of evidence of criticality for the thickness of the fourth material layer by Applicant, it is obvious to optimize the material.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks, can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



L. Ferguson
Patent Examiner
AU 1794



MILTON I. CANO
SUPERVISORY PATENT EXAMINER